XENOTEST® 440

XENON TEST INSTRUMENT



Light Exposure
and Weathering Testing
Instrument

ATLAS®
MATERIAL TESTING SOLUTIONS

AMETEK®

Applications and Standards

What is your material's durability performance to the elements? Guessing shouldn't be an option. You need to know, and in the shortest period of time.

With the Xenotest® 440 instrument, material changes caused by weathering - sunlight, temperature and moisture, can be highly accelerated. For example, color fading, embrittlement or yellowing that would occur naturally over the course of months or years can be realistically simulated within days or weeks.

The Xenotest 440 model is a highly versatile weathering instrument suitable for testing materials such as textiles, plastics, coatings as well as interior and exterior automotive parts. The Xenotest 440, with XenoLogicTM lamp technology, is powered by two 2200 W xenon lamps capable of reaching 2-sun irradiance levels for significantly shorter test times and longer lamp service life.

Standards	Xenotest 440
ISO	105-B02, -B04, -B06, -B10, 4892-2, 11341, 16474-2
IEC	60068-2-5
GB/T	8427, 16259
ASTM	G151, G155, D2565, D7869
AATCC	TM 16.3 (Options 1,2,3), TM 169
VDA	75202
SAE	J2412, J2527
VW	PV 1303, PV 1306, PV 3929, PV 3930



Features

Xenotest® 440

- 2310 cm² sample capacity
- 2x 2200 W air-cooled xenon lamp
- 10.1" XenoTouch II user interface
- WXView II compatible
- Setpoint monitoring
- Large test library incl. 30 most used weathering tests
- Rotating specimen rack
- Radio-controlled, revolving XENOSENSIV® sensor for measuring the irradiance and Black Standard/Black Panel temperature
- Narrow band (340 nm or 420 nm) or broad band (300-400 nm)
- Ultrasonic humidifier
- Back spray option







XenoTouch II User Interface and WXViewII™

Xenotest are equipped with a large 10.1" XenoTouch II UI. It harmonizes the user experience across all Atlas xenon-arc models. With its self-explanatory icons, and intuitive programming, operators can effortlessly transition between any Atlas SUNTEST, Xenotest, or Ci Weather-Ometer.

With 15 user-selectable languages, operators in any global lab can walk right up to a Xenotest and begin programming.

Atlas developed online DAQ software WXView II, since remote access to test data and reporting is crucial.

WXView II allows users to:

- View live and archived data from anywhere, anytime.
- Will generate uneditable PDF reports as proof of testing.



XenoTouch II

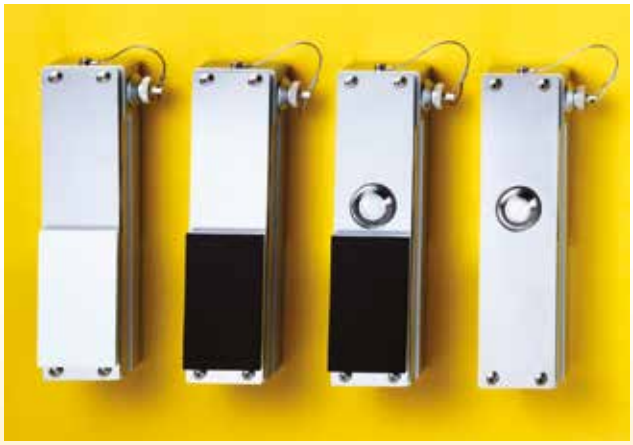


WXView II

Accessories

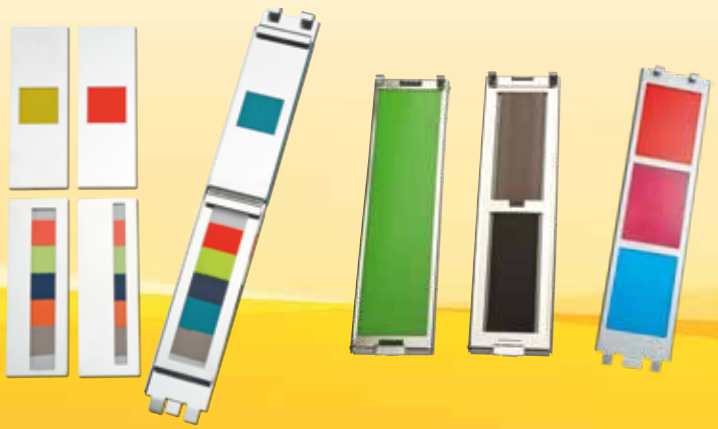
XenoCal® Sensors for Accurate Instrument Calibration

All XenoCal calibration sensors operate independently of the instrument's control system to ensure accurate calibration. XenoCal 300-400 BST is a practical 2in1 calibration tool. Thanks to long-term stability, only annual or semi-annual recalibrations are typically needed.



Specimen Holders and Cover Masks

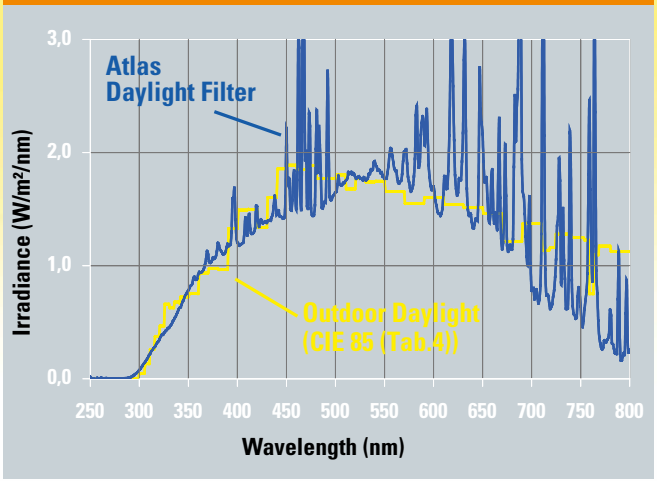
Narrow specimen holders with quick-clamp technology enable easy specimen preparation. Holders are available for specimens less than 3 mm, up to 10 mm thick, as well as appropriate cover masks for testing to various ISO and AATCC textile standards. Three additional wide specimen holders support larger sample formats.



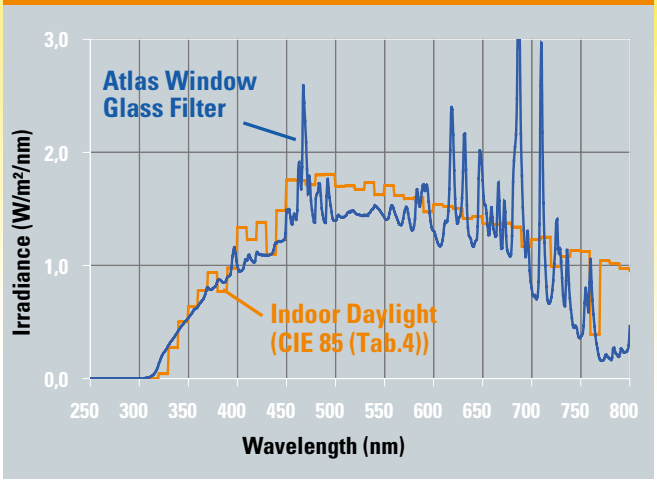


Optical Components

Outdoor Daylight Simulation



Outdoor Daylight Simulation behind Window Glass



Light According to Standards

A variety of optical filter systems are available to simulate the full daylight spectrum, outdoors or behind window glass, as required by the applicable ISO, AATCC, ASTM, or SAE xenon test methods.

All filter systems are non-aging and maintain the required spectrum over their lifetime. The outer cylinder UV-Special completes all optical filter systems Right Light and Extended UV, which requires combination with outer cylinder Quartz.



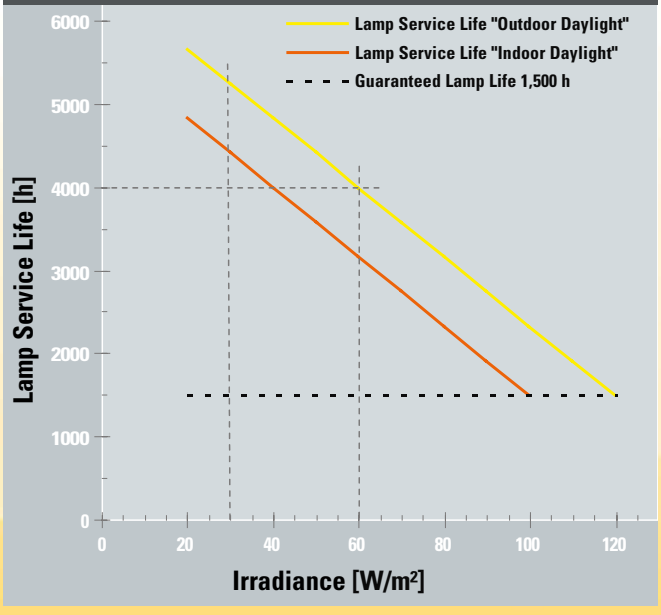
Optical Filters

XenoLOGIC Lamp Operating Technology

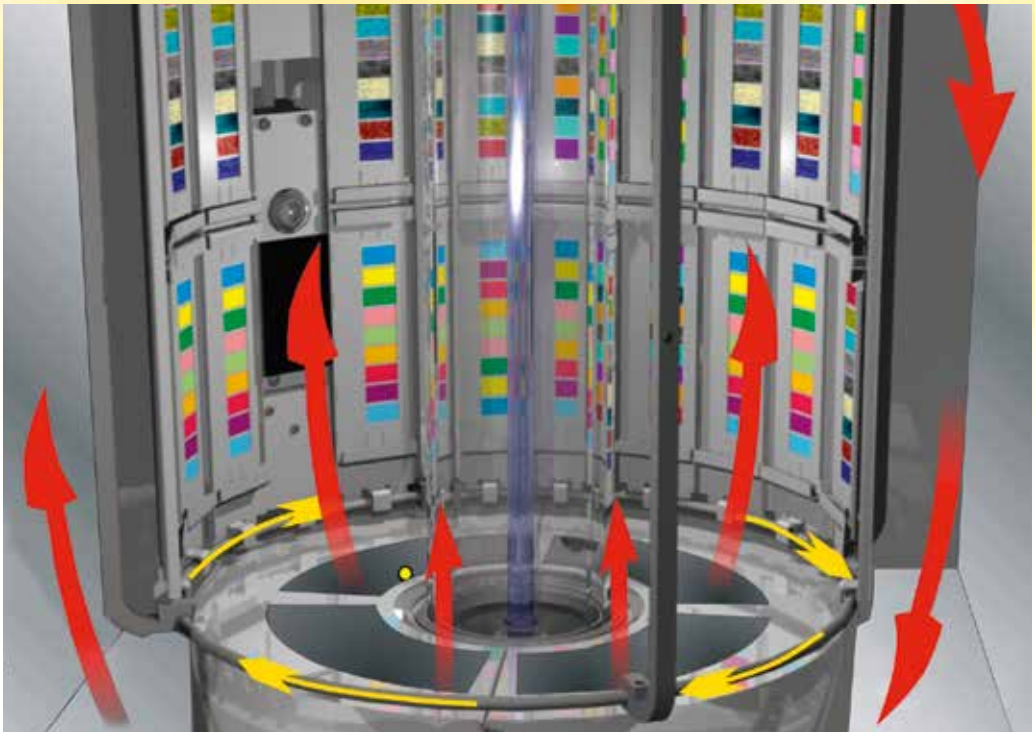
XenoLogic™, is Atlas' revolutionary new twin-lamp operating technology for extended lamp service life.

With XenoLogic™, two xenon lamps are synchronized continuously to operate at the lowest possible stress level, which allows for optimum light efficiency. With XenoLogic™ lamp operating technology, the two xenon lamps combined can operate over 4,000 hours at irradiances of 30-60 W/m² (300-400 nm).

XenoLogic: Effect on Lamp Service Life



Temperature, Humidity and Specimen Spray



Air Flow in Test Chamber

Humidity Control

Because water is a precious resource, Xenotest® humidifiers are optimized to reduce water consumption, necessary to meet test conditions.

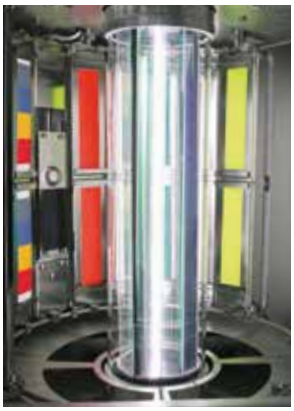
The extremely efficient ultrasonic humidifiers are linked to an integrated 60 liter water reservoir, enabling continuous operation over a period of 3 to 4 weeks*.

Additionally, the humidifier's design allows the speed and direction of the air flow inside the test chamber to operate as efficiently as possible, providing the highest uniformity throughout the exposure area.

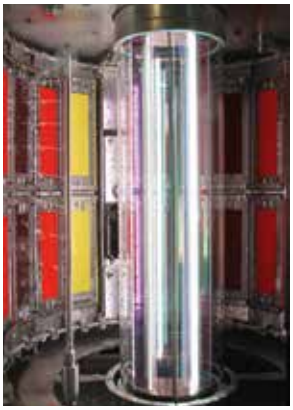
(* under the conditions of standard ISO 105-B02)

Front Spray/Back Spray

To simulate the damaging effects of water, front spray and back spray are available.



BST Control on Specimen Rack



Integrated Specimen Spray System

Temperature Control

Ambient and surface temperatures can have a significant impact on degradation and fading rates.

Xenotest chambers control BST/BPT directly on the specimen rack within ± 2°C. Both BST/BPT and CAT can be controlled simultaneously in all Xenotest instruments to achieve ideal test conditions.

ATLAS MATERIAL TESTING SOLUTIONS / AMETEK®

Atlas offers more than testing instruments. From technical advice to final test method implementation, Atlas provides the support that you need when determining the right weathering testing solution for your products. For more information, please contact your local Atlas sales office or visit us at **www.atlas-mts.com**.

Technical Data Xenotest 440

Air-cooled xenon lamp		2200 W (2)
Specimen area		3070 cm²
Specimen rack capacity		2310 cm²
Test positions		38/11/22/33
Specimen holder Standard		13.5 x 4.5 cm
Specimen holder Standard-1B		28.5 x 7.5 cm
Specimen holder Standard-2B		14.0 x 7.5 cm
Specimen holder Standard-3B		9.0 x 7.5 cm
Light monitor (on-rack) XENOSENSIV®		XENOSENSIV®
Irradiance		
W/m²	300 - 400nm	30 - 120
W/m²/nm	340nm	0.25 - 1.05
W/m²/nm	420nm	0.50 - 2.50
Temperature and Humidity		
BST (°C)		40 - 115
BPT (°C)		40 - 115
CAT (°C) max.		65
RH (%) during light cycle		20-95
Integrated water reservoir		60 liters
Water consumption (humidifier)		approx. 0.12 l/h*
Water consumption (spray)		approx. 0.7 l/min*
Simultaneous BST/BPT and CAT control		automatic
Specimen spray		●
Parameter check for set values		●
Serial interface		●
Touch screen		●
Memory card interface		●
Ethernet interface + add-ons		●
WXView II compatible		●
XenoLogic technology		●

Physical and Electrical Data

Width x Depth x Height	90 x 78 x 180 cm
Weight	290 kg
Electrical	400 V ±10%, 50/60 Hz
Electrical Power	approx. 8 kVA

Optical Filters

	Application
Right Light®	Weathering using Type I Daylight, ASTM D7869, IEC 62788-7-2, ISO 4892-2, ASTM G155
XENOCHROME® 300	Weathering using Type I/II Daylight ISO 105-B10 (A), ISO 4892-2, ISO 16474, ASTM G155
XENOCHROME® 300 ext. IR	Weathering, extended IR, PV 3929, ISO 105-B04/ -B10 (C, D)
XENOCHROME® 320	Lightfastness ISO 105-B02
XENOCHROME® 320 ext. IR	Lightfastness ISO PV 1303, ISO 105-B06
TM16	Lightfastness, AATCC TM16
Extended UV	Weathering/Lightfastness using excess UV, SAE J2527, J2412

The control ranges depend on the ambient conditions, the instrument settings and optical filter system used.

* under the conditions of standard ISO 105-B02
● Standard
◇ Optional

Ask for AMECARE Maintenance Packages

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Specifications, features and standards are subject to change without notice.

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